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LISTING, Pages 1 - 39
Attorney Docket No: P-LJ 5037

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Karly Tambara

Printed Name of Person Mailing Paper or Fee

K. Tambara

Signature of Person Mailing Paper or Fee

SEQUENCE LISTING

<110> Reed, John C.
 Godzik, Adam
 Pawlowski, Krzysztof
 Fiorentino, Loredana
 Lee, Sug Hyung
 Roth, Wilfred
 Stenner-Liewen, Frank

<120> Novel Death Domain Proteins

<130> P-LJ 5037

<150> 60/301,889

<151> 2001-06-29

<150> 09/715,893

<151> 2000-11-17

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Pro	Glu	Glu	Leu	Ala	Leu	Val	His	Asn	Leu	Arg	Lys	Met	Met	Lys	Asn	
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Asp	Trp	His	Gly	Gly	Ala	Ile	Val	Ser	Ala	Leu	Ser	Gln	Thr	Gly	Ser	
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 Gly Thr Gly Lys Thr Leu Ser Leu Cys His Val Ile His Phe Cys Ala
 20 25 30
 aaa cag gac tgg ctg ata cta cat att cca gat gct cat ctt tgg gtg 144
 Lys Gln Asp Trp Leu Ile Leu His Ile Pro Asp Ala His Leu Trp Val
 35 40 45
 aaa aat tgt cgg gat ctt ctg cag tcc agc tac aac aaa cag cgc ttt 192
 Lys Asn Cys Arg Asp Leu Leu Gln Ser Ser Tyr Asn Lys Gln Arg Phe
 50 55 60
 gat caa cct tta gag gct tca acc tgg ctg aag aat ttc aaa act aca 240
 Asp Gln Pro Leu Glu Ala Ser Thr Trp Leu Lys Asn Phe Lys Thr Thr
 65 70 75 80
 aat gag cgc ttc ctg aac cag ata aaa gtt caa gag aag tat gtc tgg 288
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Asn Lys Arg

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35 40 45
Lys Asn Cys Arg Asp Leu Leu Gln Ser Ser Tyr Asn Lys Gln Arg Phe
50 55 60
Asp Gln Pro Leu Glu Ala Ser Thr Trp Leu Lys Asn Phe Lys Thr Thr
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Phe Ile Asp Pro Gln Glu Gly Trp Lys Lys Leu Ala Val Ala Ile Lys
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Lys Pro Ser Gly Asp Asp Arg Tyr Asn Gln Phe His Ile Arg Arg Phe
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Glu Ala Leu Leu Gln Thr Gly Lys Ser Pro Thr Ser Glu Leu Leu Phe
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Asp Trp Gly Thr Thr Asn Cys Thr Val Gly Asp Leu Val Asp Leu Leu
65 70 75 80

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 val pro

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 35 40 45
 glu ala leu leu gln thr gly lys ser pro thr ser glu leu leu phe
 50 55 60
 asp trp gly thr thr asn cys thr val gly asp leu val asp leu leu
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 arg met phe glu val val gly gly gln leu thr glu cys glu leu glu
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 ctc ctg gcc ttt ctg ctg gat gag gct cct ggc gcc gcc gga ggc tta 144
 leu leu ala phe leu leu asp glu ala pro gly ala ala gly gly leu
 35 40 45
 gcc cgg gcc cgc agc ggc cta gag ctc ctg ctg gag ctg gag cgc cgc 192

Ala Arg Ala Arg Ser Gly Leu Glu Leu Leu Leu Glu Leu Glu Arg Arg
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ggg cag tgc gac gag agc aac ctg cgg ctg ctg ggg caa ctc ctg cgc 240
Gly Gln Cys Asp Glu Ser Asn Leu Arg Leu Leu Gly Gln Leu Leu Arg
65 70 75 80

gtg ctg gcc cgc cac gac ctg ctg ccg cac ctg gcg cgc aag cgg cgc 288
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35 40 45
Ala Arg Ala Arg Ser Gly Leu Glu Leu Leu Leu Glu Leu Glu Arg Arg
50 55 60
Gly Gln Cys Asp Glu Ser Asn Leu Arg Leu Leu Gly Gln Leu Leu Arg
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Leu Glu Ala His Glu Pro Ser Glu Ala Ala Lys Ala Lys Val Ala Thr
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cgc caa agc att gct gct cac cta gat aac cag gtt cca gtt gag agt 205
 Arg Gln Ser Ile Ala Ala His Leu Asp Asn Gln Val Pro Val Glu Ser
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ccg aga gct att tcc cgc acc aat gag aat gac ccg gcc aag cat ggg 253
 Pro Arg Ala Ile Ser Arg Thr Asn Glu Asn Asp Pro Ala Lys His Gly
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Glu Glu Leu Ala Leu Val His Asn Leu Arg Lys Met Met Lys Asn Asp
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 Trp His Gly Gly Ala Ile Val Ser Ala Leu Ser Gln Thr Gly Ser Leu
 305 310 315
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 Phe Lys Pro Arg Lys Ala Tyr Leu Pro Gln Glu Leu Leu Gly Lys Glu
 320 325 330
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 Gly Phe Asp Ala Leu Asp Pro Phe Ile Pro Ile Leu Val Ser Asn Tyr
 335 340 345
 aac cca aag gaa ttt gaa agt tgt att cag tat tat ttg gaa aac aat 1165
 Asn Pro Lys Glu Phe Glu Ser Cys Ile Gln Tyr Tyr Leu Glu Asn Asn
 350 355 360
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 Trp Leu Gln His Glu Lys Ala Pro Thr Glu Glu Gly Lys Lys Glu Leu
 365 370 375 380
 ctg ttc cta agt aac gcg aac ccc tcg ctg ctg gag cgg cac tgt gcc 1261
 Leu Phe Leu Ser Asn Ala Asn Pro Ser Leu Leu Glu Arg His Cys Ala
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 Tyr Leu
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 35 40 45
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 Gly Gln His Tyr Asn Ile Ser Pro Gln Asp Leu Glu Thr Val Phe Pro
 65 70 75 80
 His Gly Leu Pro Pro Arg Phe Val Met Gln Val Lys Thr Phe Ser Glu
 85 90 95

1004544554

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Asp	Lys	Asp	Arg	Thr	Leu	Met	Thr	Pro	Val	Gln	Asn	Leu	Glu	Gln	Ser		
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Gly	Glu	Gly	Gly	Phe	Gly	Val	Val	Tyr	Lys	Gly	Tyr	Val	Asn	Asn	Thr		
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Thr	Val	Ala	Val	Lys	Lys	Leu	Ala	Ala	Met	Val	Asp	Ile	Thr	Thr	Glu		
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225				230								235				240	

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Gln	His	Glu	Asn	Leu	Val	Glu	Leu	Leu	Gly	Phe	Ser	Ser	Asp	Gly	Asp	
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gac	ctc	tgc	tta	gta	tat	gtt	tac	atg	cct	aat	ggt	tca	ttg	cta	gac	816
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Glu	Lys	Phe	Ala	Gln	Thr	Val	Met	Thr	Ser	Arg	Ile	Val	Gly	Thr	Thr	
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Ala	Tyr	Met	Ala	Pro	Glu	Ala	Leu	Arg	Gly	Glu	Ile	Thr	Pro	Lys	Ser	
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gat	att	tac	agc	ttt	ggt	gtg	gtt	tta	cta	gaa	ata	ata	act	gga	ctt	1152
Asp	Ile	Tyr	Ser	Phe	Gly	Val	Val	Leu	Leu	Glu	Ile	Ile	Thr	Gly	Leu	
	370					375					380					
cca	gct	gtg	gat	gaa	cac	cgt	gaa	cct	cag	tta	ttg	cta	gat	att	aaa	1200
Pro	Ala	Val	Asp	Glu	His	Arg	Glu	Pro	Gln	Leu	Leu	Leu	Asp	Ile	Lys	
385					390					395					400	
gaa	gaa	att	gaa	gat	gaa	gaa	aag	aca	att	gaa	gat	tat	att	gat	aaa	1248
Glu	Glu	Ile	Glu	Asp	Glu	Glu	Lys	Thr	Ile	Glu	Asp	Tyr	Ile	Asp	Lys	
			405						410					415		
aag	atg	aat	gat	gct	gat	tcc	act	tca	gtt	gaa	gct	atg	tac	tct	gtt	1296
Lys	Met	Asn	Asp	Ala	Asp	Ser	Thr	Ser	Val	Glu	Ala	Met	Tyr	Ser	Val	
			420					425					430			
gct	agt	caa	tgt	ctg	cat	gaa	aag	aaa	aat	aag	aga	cca	gac	att	aag	1344
Ala	Ser	Gln	Cys	Leu	His	Glu	Lys	Lys	Asn	Lys	Arg	Pro	Asp	Ile	Lys	
		435					440					445				
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<210> 16
 <211> 460
 <212> PRT
 <213> Homo sapien

<400> 16

Met	Asn	Lys	Pro	Ile	Thr	Pro	Ser	Thr	Tyr	Val	Arg	Cys	Leu	Asn	Val
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Gly	Leu	Ile	Arg	Lys	Leu	Ser	Asp	Phe	Ile	Asp	Pro	Gln	Glu	Gly	Trp
			20					25					30		
Lys	Lys	Leu	Ala	Val	Ala	Ile	Lys	Lys	Pro	Ser	Gly	Asp	Asp	Arg	Tyr
		35					40					45			
Asn	Gln	Phe	His	Ile	Arg	Arg	Phe	Glu	Ala	Leu	Leu	Gln	Thr	Gly	Lys
	50					55					60				
Ser	Pro	Thr	Ser	Glu	Leu	Leu	Phe	Asp	Trp	Gly	Thr	Thr	Asn	Cys	Thr
65					70					75					80
Val	Gly	Asp	Leu	Val	Asp	Leu	Leu	Ile	Gln	Asn	Glu	Phe	Phe	Ala	Pro
				85					90					95	
Ala	Ser	Leu	Leu	Leu	Pro	Asp	Ala	Val	Pro	Lys	Thr	Ala	Asn	Thr	Leu
		100						105					110		
Pro	Ser	Lys	Glu	Ala	Ile	Thr	Val	Gln	Gln	Lys	Gln	Met	Pro	Phe	Cys
		115					120					125			
Asp	Lys	Asp	Arg	Thr	Leu	Met	Thr	Pro	Val	Gln	Asn	Leu	Glu	Gln	Ser
	130					135					140				
Tyr	Met	Pro	Pro	Asp	Ser	Ser	Ser	Pro	Glu	Asn	Lys	Ser	Leu	Glu	Val
145					150					155					160
Ser	Asp	Thr	Arg	Phe	His	Ser	Phe	Ser	Phe	Tyr	Glu	Leu	Lys	Asn	Val
				165					170					175	
Thr	Asn	Asn	Phe	Asp	Glu	Arg	Pro	Ile	Ser	Val	Gly	Gly	Asn	Lys	Met
		180					185						190		
Gly	Glu	Gly	Gly	Phe	Gly	Val	Val	Tyr	Lys	Gly	Tyr	Val	Asn	Asn	Thr
	195					200						205			
Thr	Val	Ala	Val	Lys	Lys	Leu	Ala	Ala	Met	Val	Asp	Ile	Thr	Thr	Glu
	210					215					220				
Glu	Leu	Lys	Gln	Gln	Phe	Asp	Gln	Glu	Ile	Lys	Val	Met	Ala	Lys	Cys
225					230					235					240
Gln	His	Glu	Asn	Leu	Val	Glu	Leu	Leu	Gly	Phe	Ser	Ser	Asp	Gly	Asp
			245						250					255	
Asp	Leu	Cys	Leu	Val	Tyr	Val	Tyr	Met	Pro	Asn	Gly	Ser	Leu	Leu	Asp
	260							265					270		
Arg	Leu	Ser	Cys	Leu	Asp	Gly	Thr	Pro	Pro	Leu	Ser	Trp	His	Met	Arg
	275						280					285			
Cys	Lys	Ile	Ala	Gln	Gly	Ala	Ala	Asn	Gly	Ile	Asn	Phe	Leu	His	Glu
	290					295					300				
Asn	His	His	Ile	His	Arg	Asp	Ile	Lys	Ser	Ala	Asn	Ile	Leu	Leu	Asp
305					310					315					320
Glu	Ala	Phe	Thr	Ala	Lys	Ile	Ser	Asp	Phe	Gly	Leu	Ala	Arg	Ala	Ser
			325						330					335	
Glu	Lys	Phe	Ala	Gln	Thr	Val	Met	Thr	Ser	Arg	Ile	Val	Gly	Thr	Thr
	340							345					350		
Ala	Tyr	Met	Ala	Pro	Glu	Ala	Leu	Arg	Gly	Glu	Ile	Thr	Pro	Lys	Ser
	355						360					365			
Asp	Ile	Tyr	Ser	Phe	Gly	Val	Val	Leu	Leu	Glu	Ile	Ile	Thr	Gly	Leu

370	375	380
Pro Ala Val Asp Glu His Arg Glu Pro Gln Leu Leu Asp Ile Lys		
385	390	395
Glu Glu Ile Glu Asp Glu Glu Lys Thr Ile Glu Asp Tyr Ile Asp Lys		400
	405	410
Lys Met Asn Asp Ala Asp Ser Thr Ser Val Glu Ala Met Tyr Ser Val		415
	420	425
Ala Ser Gln Cys Leu His Glu Lys Lys Asn Lys Arg Pro Asp Ile Lys		430
	435	440
Lys Val Gln Gln Leu Leu Gln Glu Met Thr Ala Ser		445
450	455	460

<210> 17
 <211> 1924
 <212> DNA
 <213> Homo sapien

<220>
 <221> CDS
 <222> (91)...(1044)

<221> misc_feature
 <222> (1)...(1900)
 <223> n = A,T,C or G

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 Met Ala Leu Ser Gly Ser Thr Pro
 1 5

gcc ccg tgc tgg gag gag gat gag tgc ctg gac tac tac ggg atg ctg 162
 Ala Pro Cys Trp Glu Glu Asp Glu Cys Leu Asp Tyr Tyr Gly Met Leu
 10 15 20

tgc ctt cac cgt atg ttc gag gtg gtg ggc ggg caa ctg acc gag tgc 210
 Ser Leu His Arg Met Phe Glu Val Val Gly Gly Gln Leu Thr Glu Cys
 25 30 35 40

gag ctg gag ctc ctg gcc ttt ctg ctg gat gag gct cct ggc gcc gcc 258
 Glu Leu Glu Leu Leu Ala Phe Leu Leu Asp Glu Ala Pro Gly Ala Ala
 45 50 55

gga ggc tta gcc cgg gcc cgc agc ggc cta gag ctc ctg ctg gag ctg 306
 Gly Gly Leu Ala Arg Ala Arg Ser Gly Leu Glu Leu Leu Glu Leu
 60 65 70

gag cgc cgc ggg cag tgc gac gag agc aac ctg cgg ctg ctg ggg caa 354
 Glu Arg Arg Gly Gln Cys Asp Glu Ser Asn Leu Arg Leu Leu Gly Gln
 75 80 85

ctc ctg cgc gtg ctg gcc cgc cac gac ctg ctg ccg cac ctg gcg cgc 402
 Leu Leu Arg Val Leu Ala Arg His Asp Leu Leu Pro His Leu Ala Arg
 90 95 100

aag	cgg	cgc	cgg	cca	gtg	tct	cca	gaa	cgc	tat	agc	tat	ggc	acc	tcc	450
Lys	Arg	Arg	Arg	Pro	Val	Ser	Pro	Glu	Arg	Tyr	Ser	Tyr	Gly	Thr	Ser	
105					110					115					120	
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Ser	Ser	Ser	Lys	Arg	Thr	Glu	Gly	Ser	Cys	Arg	Arg	Arg	Arg	Gln	Ser	
				125					130					135		
agc	agt	tct	gca	aat	tct	cag	cag	ggg	cag	tgg	gag	aca	ggc	tcc	ccc	546
Ser	Ser	Ser	Ala	Asn	Ser	Gln	Gln	Gly	Gln	Trp	Glu	Thr	Gly	Ser	Pro	
			140					145					150			
cca	acc	aag	cgg	cag	cgg	cgg	agt	cgg	ggc	cgg	ccc	agt	ggg	ggg	gcc	594
Pro	Thr	Lys	Arg	Gln	Arg	Arg	Ser	Arg	Gly	Arg	Pro	Ser	Gly	Gly	Ala	
		155					160					165				
aga	cgg	cgg	cgg	aga	ggg	gcc	cca	gcc	gca	ccc	cag	cag	cag	tca	gag	642
Arg	Arg	Arg	Arg	Arg	Gly	Ala	Pro	Ala	Ala	Pro	Gln	Gln	Gln	Ser	Glu	
	170					175					180					
ccc	gcc	aga	cct	tcc	tct	gaa	ggc	aaa	gtg	acc	tgt	gac	atc	cgg	ctc	690
Pro	Ala	Arg	Pro	Ser	Ser	Glu	Gly	Lys	Val	Thr	Cys	Asp	Ile	Arg	Leu	
185					190					195					200	
cgg	gtt	cga	gca	gag	tac	tgc	gag	cat	ggg	cca	gcc	ttg	gag	cag	ggc	738
Arg	Val	Arg	Ala	Glu	Tyr	Cys	Glu	His	Gly	Pro	Ala	Leu	Glu	Gln	Gly	
				205					210					215		
gtg	gca	tcc	cgg	cgg	ccc	cag	gog	ctg	gcg	cgg	cag	ctg	gac	gtg	ttt	786
Val	Ala	Ser	Arg	Arg	Pro	Gln	Ala	Leu	Ala	Arg	Gln	Leu	Asp	Val	Phe	
			220					225					230			
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Gly	Gln	Ala	Thr	Ala	Val	Leu	Arg	Ser	Arg	Asp	Leu	Gly	Ser	Val	Val	
		235					240					245				
tgt	gac	atc	aag	ttc	tca	gag	ctc	tcc	tat	ctg	gac	gcc	ttc	tgg	ggc	882
Cys	Asp	Ile	Lys	Phe	Ser	Glu	Leu	Ser	Tyr	Leu	Asp	Ala	Phe	Trp	Gly	
	250					255					260					
gac	tac	ctg	agt	ggc	gcc	ctg	ctg	cag	gcc	ctg	cgg	ggc	gtg	ttc	ctg	930
Asp	Tyr	Leu	Ser	Gly	Ala	Leu	Leu	Gln	Ala	Leu	Arg	Gly	Val	Phe	Leu	
265					270					275					280	
act	gag	gcc	ctg	cga	gag	gct	gtg	ggc	cgg	gag	gct	gtt	cgc	ctg	ctg	978
Thr	Glu	Ala	Leu	Arg	Glu	Ala	Val	Gly	Arg	Glu	Ala	Val	Arg	Leu	Leu	
				285					290					295		
gtc	agt	gtg	gat	gag	gct	gac	tat	gag	gct	ggc	cgg	cgc	cgc	ctg	ttg	1026
Val	Ser	Val	Asp	Glu	Ala	Asp	Tyr	Glu	Ala	Gly	Arg	Arg	Arg	Leu	Leu	
			300					305					310			
ctg	atg	gag	gag	gaa	ggg	ggg	cggcgcgc	cgacagaggc	ctcctgatcc							1074
Leu	Met															


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aggactggca ggattgatcc cacctccaag tctccgggcc accttctcct gggaggacga 1134
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aaaaaaaaa 1924

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<210> 18

<211> 318

<212> PRT

<213> Homo sapien

<400> 18

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Val Gly Gly Gln Leu Thr Glu Cys Glu Leu Glu Leu Leu Ala Phe Leu
35     40     45
Leu Asp Glu Ala Pro Gly Ala Ala Gly Gly Leu Ala Arg Ala Arg Ser
50     55     60
Gly Leu Glu Leu Leu Leu Glu Leu Glu Arg Arg Gly Gln Cys Asp Glu
65     70     75     80
Ser Asn Leu Arg Leu Leu Gly Gln Leu Leu Arg Val Leu Ala Arg His
85     90     95
Asp Leu Leu Pro His Leu Ala Arg Lys Arg Arg Arg Pro Val Ser Pro
100    105    110
Glu Arg Tyr Ser Tyr Gly Thr Ser Ser Ser Lys Arg Thr Glu Gly
115    120    125
Ser Cys Arg Arg Arg Arg Gln Ser Ser Ser Ser Ala Asn Ser Gln Gln
130    135    140
Gly Gln Trp Glu Thr Gly Ser Pro Pro Thr Lys Arg Gln Arg Arg Ser
145    150    155    160
Arg Gly Arg Pro Ser Gly Gly Ala Arg Arg Arg Arg Gly Ala Pro
165    170    175
Ala Ala Pro Gln Gln Gln Ser Glu Pro Ala Arg Pro Ser Ser Glu Gly
180    185    190
Lys Val Thr Cys Asp Ile Arg Leu Arg Val Arg Ala Glu Tyr Cys Glu
195    200    205
His Gly Pro Ala Leu Glu Gln Gly Val Ala Ser Arg Arg Pro Gln Ala
210    215    220
Leu Ala Arg Gln Leu Asp Val Phe Gly Gln Ala Thr Ala Val Leu Arg
225    230    235    240
Ser Arg Asp Leu Gly Ser Val Val Cys Asp Ile Lys Phe Ser Glu Leu

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245 250 255
 Ser Tyr Leu Asp Ala Phe Trp Gly Asp Tyr Leu Ser Gly Ala Leu Leu
 260 265 270
 Gln Ala Leu Arg Gly Val Phe Leu Thr Glu Ala Leu Arg Glu Ala Val
 275 280 285
 Gly Arg Glu Ala Val Arg Leu Leu Val Ser Val Asp Glu Ala Asp Tyr
 290 295 300
 Glu Ala Gly Arg Arg Arg Leu Leu Leu Met Glu Glu Glu Gly
 305 310 315

<210> 19
 <211> 696
 <212> DNA
 <213> Chlamydia trachomatis

<220>
 <221> CDS
 <222> (1)...(693)

<400> 19
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 Met Met Glu Val Phe Met Asn Phe Leu Asp Gln Leu Asp Leu Ile Ile
 1 5 10 15
 caa aat aag cat atg cta gaa cac acg ttt tat gtg aaa tgg tcg aag 96
 Gln Asn Lys His Met Leu Glu His Thr Phe Tyr Val Lys Trp Ser Lys
 20 25 30
 ggg gag ctt act aaa gag caa tta cag gcg tat gcc aaa gac tat tat 144
 Gly Glu Leu Thr Lys Glu Gln Leu Gln Ala Tyr Ala Lys Asp Tyr Tyr
 35 40 45
 tta cat atc aaa gcc ttt cct aaa tat tta tct gcg att cat agt cgt 192
 Leu His Ile Lys Ala Phe Pro Lys Tyr Leu Ser Ala Ile His Ser Arg
 50 55 60
 tgc gat gat tta gag gcg cgt aag tta ttg tta gat aac ttg atg gat 240
 Cys Asp Asp Leu Glu Ala Arg Lys Leu Leu Leu Asp Asn Leu Met Asp
 65 70 75 80
 gaa gag aac ggt tac cct aat cat att gat ttg tgg aag cag ttt gtg 288
 Glu Glu Asn Gly Tyr Pro Asn His Ile Asp Leu Trp Lys Gln Phe Val
 85 90 95
 ttt gct cta gga gtt act cca gaa gag tta gag gct cat gag cct agt 336
 Phe Ala Leu Gly Val Thr Pro Glu Glu Leu Glu Ala His Glu Pro Ser
 100 105 110
 gaa gca gca aaa gcg aaa gta gct act ttc atg cgg tgg tgt aca gga 384
 Glu Ala Ala Lys Ala Lys Val Ala Thr Phe Met Arg Trp Cys Thr Gly
 115 120 125
 gat tct tta gct gca gga gtg gct gct ttg tat tct tat gag agt caa 432
 Asp Ser Leu Ala Ala Gly Val Ala Ala Leu Tyr Ser Tyr Glu Ser Gln

Ala Asp Val Arg His Ala Arg Glu Glu Lys Ala Leu Ile Glu Met Leu
 180 185 190
 Leu Lys Asp Asp Ala Asp Lys Val Leu Glu Ala Ser Gln Glu Val Thr
 195 200 205
 Gln Ser Leu Tyr Gly Phe Leu Asp Ser Phe Leu Asp Pro Arg Thr Cys
 210 215 220
 Cys Ser Cys His Gln Ser Tyr
 225 230

<210> 21
 <211> 687
 <212> DNA
 <213> Mus musculus

<220>
 <221> CDS
 <222> (1)...(684)

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 Met Leu Tyr Asn Val Ser Lys Gly Val Val Tyr Ser Asp Thr Ala Leu
 1 5 10 15
 cag ggg cag gac ggg gac agg gaa gga atg tgg gta gga gct ggg gga 96
 Gln Gly Gln Asp Gly Asp Arg Glu Gly Met Trp Val Gly Ala Gly Gly
 20 25 30
 gcc cta gcc ccc aat acc tcc tcc cta ttt ccc cct gag cct cca ggg 144
 Ala Leu Ala Pro Asn Thr Ser Ser Leu Phe Pro Pro Glu Pro Pro Gly
 35 40 45
 gcc tcg agc aac atc att cct gtc tac tgt gct ctc cta gct aca gtg 192
 Ala Ser Ser Asn Ile Ile Pro Val Tyr Cys Ala Leu Leu Ala Thr Val
 50 55 60
 atc ctt ggt ctg ctg gcc tat gtg gcc ttc aaa tgc tgg cgc tca cat 240
 Ile Leu Gly Leu Leu Ala Tyr Val Ala Phe Lys Cys Trp Arg Ser His
 65 70 75 80
 aag caa agg caa cag ttg gct aaa gct cgg act gta gag cta ggg gac 288
 Lys Gln Arg Gln Gln Leu Ala Lys Ala Arg Thr Val Glu Leu Gly Asp
 85 90 95
 cct gac agg gac cag agg cgt ggt gac agc aac gtc ttc gtg gac tct 336
 Pro Asp Arg Asp Gln Arg Arg Gly Asp Ser Asn Val Phe Val Asp Ser
 100 105 110
 cct cct agt ctg gag ccc tgt att ccc agc cag gga cca cac ccg gac 384
 Pro Pro Ser Leu Glu Pro Cys Ile Pro Ser Gln Gly Pro His Pro Asp
 115 120 125
 ctt ggc tgc cag ctt tac ctg cat att cca cag cag cag cag gag gaa 432
 Leu Gly Cys Gln Leu Tyr Leu His Ile Pro Gln Gln Gln Gln Glu Glu
 130 135 140

gtc cag cgg ctc ctg atg atg ggt gag cca gcc aag ggc tgg cag gag 480
Val Gln Arg Leu Leu Met Met Gly Glu Pro Ala Lys Gly Trp Gln Glu
145 150 155 160

ctg gca ggc cac ctc ggc tac caa gct gag gct gtg gaa acc atg gcc 528
Leu Ala Gly His Leu Gly Tyr Gln Ala Glu Ala Val Glu Thr Met Ala
165 170 175

tgt gac caa atg cca gcc tat acc ctg cta agg aac tgg gct gcc caa 576
Cys Asp Gln Met Pro Ala Tyr Thr Leu Leu Arg Asn Trp Ala Ala Gln
180 185 190

gaa ggc aat aga gct acc ctc aga gtg ctg gag gat gct ctg gct gcc 624
Glu Gly Asn Arg Ala Thr Leu Arg Val Leu Glu Asp Ala Leu Ala Ala
195 200 205

ata ggc cga gaa gat gtg gtc cag gtt ttg agc tcg cca gct gag agc 672
Ile Gly Arg Glu Asp Val Val Gln Val Leu Ser Ser Pro Ala Glu Ser
210 215 220

tcc tcg gtg gtg tga 687
Ser Ser Val Val
225

<210> 22
<211> 228
<212> PRT
<213> Mus musculus

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Gln Gly Gln Asp Gly Asp Arg Glu Gly Met Trp Val Gly Ala Gly Gly
20 25 30
Ala Leu Ala Pro Asn Thr Ser Ser Leu Phe Pro Pro Glu Pro Pro Gly
35 40 45
Ala Ser Ser Asn Ile Ile Pro Val Tyr Cys Ala Leu Leu Ala Thr Val
50 55 60
Ile Leu Gly Leu Leu Ala Tyr Val Ala Phe Lys Cys Trp Arg Ser His
65 70 75 80
Lys Gln Arg Gln Gln Leu Ala Lys Ala Arg Thr Val Glu Leu Gly Asp
85 90 95
Pro Asp Arg Asp Gln Arg Arg Gly Asp Ser Asn Val Phe Val Asp Ser
100 105 110
Pro Pro Ser Leu Glu Pro Cys Ile Pro Ser Gln Gly Pro His Pro Asp
115 120 125
Leu Gly Cys Gln Leu Tyr Leu His Ile Pro Gln Gln Gln Glu Glu
130 135 140
Val Gln Arg Leu Leu Met Met Gly Glu Pro Ala Lys Gly Trp Gln Glu
145 150 155 160
Leu Ala Gly His Leu Gly Tyr Gln Ala Glu Ala Val Glu Thr Met Ala
165 170 175
Cys Asp Gln Met Pro Ala Tyr Thr Leu Leu Arg Asn Trp Ala Ala Gln

Leu Lys Asp Asp Ala Asp Lys Val Leu Glu Ala Ser Gln Glu Val Thr
 195 200 205
 Gln Ser Leu Tyr Gly Phe Leu Asp Ser Phe Leu Asp Pro Gly Thr Cys
 210 215 220
 Cys Ser Cys His Gln Ser Tyr
 225 230

<210> 25
 <211> 211
 <212> DNA
 <213> Homo sapien

<220>
 <221> CDS
 <222> (1)...(177)

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 1 5 10 15

gga cta att agg aag ctg tca gat ttt att gat cct caa gaa gga tgg 96
 Gly Leu Ile Arg Lys Leu Ser Asp Phe Ile Asp Pro Gln Glu Gly Trp
 20 25 30

aag aag tta gct gta gct att aaa aaa cca tct ggt gat gat aga tac 144
 Lys Lys Leu Ala Val Ala Ile Lys Lys Pro Ser Gly Asp Asp Arg Tyr
 35 40 45

aat cag ttt cac ata aga tgc tgt tcc caa aac taatacacta ccttctaaag 197
 Asn Gln Phe His Ile Arg Cys Cys Ser Gln Asn
 50 55

aagctataac agtt 211

<210> 26
 <211> 59
 <212> PRT
 <213> Homo sapien

<400> 26
 Met Asn Lys Pro Ile Thr Pro Ser Thr Tyr Val Arg Cys Leu Asn Val
 1 5 10 15
 Gly Leu Ile Arg Lys Leu Ser Asp Phe Ile Asp Pro Gln Glu Gly Trp
 20 25 30
 Lys Lys Leu Ala Val Ala Ile Lys Lys Pro Ser Gly Asp Asp Arg Tyr
 35 40 45
 Asn Gln Phe His Ile Arg Cys Cys Ser Gln Asn
 50 55

<210> 27
 <211> 2817
 <212> DNA

<213> Homo sapien

<220>

<221> CDS

<222> (50)...(1429)

<400> 27

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Met Asn Lys

1

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Pro Ile Thr Pro Ser Thr Tyr Val Arg Cys Leu Asn Val Gly Leu Ile

5

10

15

agg aag ctg tca gat ttt att gat cct caa gaa gga tgg aag aag tta 154

Arg Lys Leu Ser Asp Phe Ile Asp Pro Gln Glu Gly Trp Lys Lys Leu

20

25

30

35

gct gta gct att aaa aaa cca tct ggt gat gat aga tac aat cag ttt 202

Ala Val Ala Ile Lys Lys Pro Ser Gly Asp Asp Arg Tyr Asn Gln Phe

40

45

50

cac ata agg aga ttt gaa gca tta ctt caa act gga aaa agt ccc act 250

His Ile Arg Arg Phe Glu Ala Leu Leu Gln Thr Gly Lys Ser Pro Thr

55

60

65

tct gaa tta ctg ttt gac tgg ggc acc aca aat tgc aca gtt ggt gat 298

Ser Glu Leu Leu Phe Asp Trp Gly Thr Thr Asn Cys Thr Val Gly Asp

70

75

80

ctt gtg gat ctt ttg atc caa aat gaa ttt ttt gct cct gcg agt ctt 346

Leu Val Asp Leu Leu Ile Gln Asn Glu Phe Phe Ala Pro Ala Ser Leu

85

90

95

ttg ctc cca gat gct gtt ccc aaa act gct aat aca cta cct tct aaa 394

Leu Leu Pro Asp Ala Val Pro Lys Thr Ala Asn Thr Leu Pro Ser Lys

100

105

110

115

gaa gct ata aca gtt cag caa aaa cag atg cct ttc tgt gac aaa gac 442

Glu Ala Ile Thr Val Gln Gln Lys Gln Met Pro Phe Cys Asp Lys Asp

120

125

130

agg aca ttg atg aca cct gtg cag aat ctt gaa caa agc tat atg cca 490

Arg Thr Leu Met Thr Pro Val Gln Asn Leu Glu Gln Ser Tyr Met Pro

135

140

145

cct gac tcc tca agt cca gaa aat aaa agt tta gaa gtt agt gat aca 538

Pro Asp Ser Ser Ser Pro Glu Asn Lys Ser Leu Glu Val Ser Asp Thr

150

155

160

cgt ttt cac agt ttt tca ttt tat gaa ttg aag aat gtc aca aat aac 586

Arg Phe His Ser Phe Ser Phe Tyr Glu Leu Lys Asn Val Thr Asn Asn

165

170

175

Ser Pro Thr Ser Glu Leu Leu Phe Asp Trp Gly Thr Thr Asn Cys Thr
65 70 75 80
Val Gly Asp Leu Val Asp Leu Leu Ile Gln Asn Glu Phe Phe Ala Pro
85 90 95
Ala Ser Leu Leu Leu Pro Asp Ala Val Pro Lys Thr Ala Asn Thr Leu
100 105 110
Pro Ser Lys Glu Ala Ile Thr Val Gln Gln Lys Gln Met Pro Phe Cys
115 120 125
Asp Lys Asp Arg Thr Leu Met Thr Pro Val Gln Asn Leu Glu Gln Ser
130 135 140
Tyr Met Pro Pro Asp Ser Ser Ser Pro Glu Asn Lys Ser Leu Glu Val
145 150 155 160
Ser Asp Thr Arg Phe His Ser Phe Ser Phe Tyr Glu Leu Lys Asn Val
165 170 175
Thr Asn Asn Phe Asp Glu Arg Pro Ile Ser Val Gly Gly Asn Lys Met
180 185 190
Gly Glu Gly Gly Phe Gly Val Val Tyr Lys Gly Tyr Val Asn Asn Thr
195 200 205
Thr Val Ala Val Lys Lys Leu Ala Ala Met Val Asp Ile Thr Thr Glu
210 215 220
Glu Leu Lys Gln Gln Phe Asp Gln Glu Ile Lys Val Met Ala Lys Cys
225 230 235 240
Gln His Glu Asn Leu Val Glu Leu Leu Gly Phe Ser Ser Asp Gly Asp
245 250 255
Asp Leu Cys Leu Val Tyr Val Tyr Met Pro Asn Gly Ser Leu Leu Asp
260 265 270
Arg Leu Ser Cys Leu Asp Gly Thr Pro Pro Leu Ser Trp His Met Arg
275 280 285
Cys Lys Ile Ala Gln Gly Ala Ala Asn Gly Ile Asn Phe Leu His Glu
290 295 300
Asn His His Ile His Arg Asp Ile Lys Ser Ala Asn Ile Leu Leu Asp
305 310 315 320
Glu Ala Phe Thr Ala Lys Ile Ser Asp Phe Gly Leu Ala Arg Ala Ser
325 330 335
Glu Lys Phe Ala Gln Thr Val Met Thr Ser Arg Ile Val Gly Thr Thr
340 345 350
Ala Tyr Met Ala Pro Glu Ala Leu Arg Gly Glu Ile Thr Pro Lys Ser
355 360 365
Asp Ile Tyr Ser Phe Gly Val Val Leu Leu Glu Ile Ile Thr Gly Leu
370 375 380
Pro Ala Val Asp Glu His Arg Glu Pro Gln Leu Leu Leu Asp Ile Lys
385 390 395 400
Glu Glu Ile Glu Asp Glu Glu Lys Thr Ile Glu Asp Tyr Ile Asp Lys
405 410 415
Lys Met Asn Asp Ala Asp Ser Thr Ser Val Glu Ala Met Tyr Ser Gly
420 425 430
Ala Ser Gln Cys Arg His Glu Lys Lys Asn Lys Ser Pro Asp Ile Lys
435 440 445
Lys Val His Gln Leu Leu Gln Glu Met Thr Ala Ser
450 455 460

<210> 29
<211> 142
<212> PRT

<213> Homo sapien

<400> 29

Lys	Leu	Lys	Gly	Glu	Pro	Gly	Trp	Val	Thr	Ile	His	Gly	Met	Ala	Gly
1				5					10					15	
Cys	Gly	Lys	Ser	Val	Leu	Ala	Ala	Glu	Ala	Val	Arg	Asp	His	Ser	Leu
			20					25					30		
Leu	Glu	Gly	Cys	Phe	Pro	Gly	Gly	Val	His	Trp	Val	Ser	Val	Gly	Lys
		35					40					45			
Gln	Asp	Lys	Ser	Gly	Leu	Leu	Met	Lys	Leu	Gln	Asn	Leu	Cys	Thr	Arg
	50					55					60				
Leu	Asp	Gln	Asp	Glu	Ser	Phe	Ser	Gln	Arg	Leu	Pro	Leu	Asn	Ile	Glu
65					70					75					80
Glu	Ala	Lys	Asp	Arg	Leu	Arg	Ile	Leu	Met	Leu	Arg	Lys	His	Pro	Arg
			85						90					95	
Ser	Leu	Leu	Ile	Leu	Asp	Asp	Val	Trp	Asp	Ser	Trp	Val	Leu	Lys	Ala
			100					105					110		
Phe	Asp	Ser	Gln	Cys	Gln	Ile	Leu	Leu	Thr	Thr	Arg	Asp	Lys	Ser	Val
	115						120					125			
Thr	Asp	Ser	Val	Met	Gly	Pro	Lys	Tyr	Val	Val	Pro	Val	Glu		
	130						135						140		

<210> 30

<211> 145

<212> PRT

<213> C. elegans

<400> 30

Glu	Met	Cys	Asp	Leu	Asp	Ser	Phe	Phe	Leu	Phe	Leu	His	Gly	Arg	Ala
1				5					10					15	
Gly	Ser	Gly	Lys	Ser	Val	Ile	Ala	Ser	Gln	Ala	Leu	Ser	Lys	Ser	Asp
			20					25					30		
Gln	Leu	Ile	Gly	Ile	Asn	Tyr	Asp	Ser	Ile	Val	Trp	Leu	Lys	Asp	Ser
		35					40					45			
Gly	Thr	Ala	Pro	Lys	Ser	Thr	Phe	Asp	Leu	Phe	Thr	Asp	Ile	Leu	Leu
	50					55					60				
Met	Leu	Lys	Ser	Glu	Asp	Asp	Leu	Leu	Asn	Phe	Pro	Ser	Val	Glu	His
65					70					75					80
Val	Thr	Ser	Val	Val	Leu	Lys	Arg	Met	Ile	Cys	Asn	Ala	Leu	Ile	Asp
				85					90					95	
Arg	Pro	Asn	Thr	Leu	Phe	Val	Phe	Asp	Asp	Val	Val	Gln	Glu	Glu	Thr
			100					105					110		
Ile	Arg	Trp	Ala	Gln	Glu	Leu	Arg	Leu	Arg	Cys	Leu	Val	Thr	Thr	Arg
	115						120					125			
Asp	Val	Glu	Ile	Ser	Asn	Ala	Ala	Ser	Gln	Thr	Cys	Glu	Phe	Ile	Glu
	130						135								
Val															
145															

<210> 31

<211> 75

<212> PRT

<213> Homo sapien

<400> 31

Met Asp Phe Ser Arg Asn Leu Tyr Asp Ile Gly Glu Gln Leu Asp Ser
1 5 10 15
Glu Asp Leu Ala Ser Leu Lys Phe Leu Ser Leu Asp Tyr Ile Pro Gln
20 25 30
Arg Lys Gln Glu Pro Ile Lys Asp Ala Leu Met Leu Phe Gln Arg Leu
35 40 45
Gln Glu Lys Arg Met Leu Glu Glu Ser Asn Leu Ser Phe Leu Lys Glu
50 55 60
Leu Leu Phe Arg Ile Asn Arg Leu Asp Leu Leu
65 70 75

<210> 32

<211> 76

<212> PRT

<213> Homo sapien

<400> 32

His Leu Leu Ile Arg Val Met Leu Tyr Gln Ile Ser Glu Glu Val Ser
1 5 10 15
Arg Ser Glu Leu Arg Ser Phe Lys Phe Leu Leu Gln Glu Glu Ile Ser
20 25 30
Lys Cys Lys Leu Asp Asp Asp Met Asn Leu Leu Asp Ile Phe Ile Glu
35 40 45
Met Glu Lys Arg Val Ile Leu Gly Glu Gly Lys Leu Asp Ile Leu Lys
50 55 60
Arg Val Cys Ala Gln Ile Asn Lys Ser Leu Leu Lys
65 70 75

<210> 33

<211> 77

<212> PRT

<213> Homo sapien

<400> 33

Lys Val Ser Phe Arg Glu Lys Leu Leu Ile Ile Asp Ser Asn Leu Gly
1 5 10 15
Val Gln Asp Val Glu Asn Leu Lys Phe Leu Cys Ile Gly Leu Val Pro
20 25 30
Asn Lys Lys Leu Glu Lys Ser Ser Ala Ser Asp Val Phe Glu His
35 40 45
Leu Leu Ala Glu Asp Leu Leu Ser Glu Glu Asp Pro Phe Phe Leu Ala
50 55 60
Glu Leu Leu Tyr Ile Ile Arg Gln Lys Lys Leu Leu Gln
65 70 75

<210> 34

<211> 72

<212> PRT

<213> Homo sapien

<400> 34

Val Ser Leu Phe Arg Asn Leu Leu Tyr Glu Leu Ser Glu Gly Ile Asp
1 5 10 15
Ser Glu Asn Leu Lys Asp Met Ile Phe Leu Leu Lys Asp Ser Leu Pro
20 25 30
Lys Thr Glu Met Thr Ser Leu Ser Phe Leu Ala Phe Leu Glu Lys Gln
35 40 45
Gly Lys Ile Asp Glu Asp Asn Leu Thr Cys Leu Glu Asp Leu Cys Lys
50 55 60
Thr Val Val Pro Lys Leu Leu Arg
65 70

<210> 35

<211> 77

<212> PRT

<213> Homo sapien

<400> 35

Met Asp Pro Phe Leu Val Leu Leu His Ser Val Ser Ser Ser Leu Ser
1 5 10 15
Ser Ser Glu Leu Thr Glu Leu Lys Phe Leu Cys Leu Gly Arg Val Gly
20 25 30
Lys Arg Lys Leu Glu Arg Val Gln Ser Gly Leu Asp Leu Phe Ser Met
35 40 45
Leu Leu Glu Gln Asn Asp Leu Glu Pro Gly His Thr Glu Leu Leu Arg
50 55 60
Glu Leu Leu Ala Ser Leu Arg Arg His Asp Leu Leu Arg
65 70 75

<210> 36

<211> 99

<212> PRT

<213> Homo sapien

<400> 36

Trp Pro Glu Glu His Gly Glu Gln Glu His Gly Leu Tyr Ser Leu His
1 5 10 15
Arg Met Phe Asp Ile Val Gly Thr His Leu Thr His Arg Asp Val Arg
20 25 30
Val Leu Ser Phe Leu Phe Val Asp Val Ile Asp His Glu Arg Gly Leu
35 40 45
Ile Arg Asn Gly Arg Asp Phe Leu Leu Ala Leu Glu Arg Gln Gly Arg
50 55 60
Cys Asp Glu Ser Asn Phe Arg Gln Val Leu Gln Leu Leu Arg Ile Ile
65 70 75 80
Thr Arg His Asp Leu Leu Pro Tyr Val Thr Leu Lys Arg Arg Arg Ala
85 90 95
Val Cys Pro

<210> 37

<211> 99

<212> PRT
 <213> Mus musculus

<400> 37
 Trp Pro Glu Glu Arg Gly Glu Gln Glu His Gly Leu Tyr Ser Leu His
 1 5 10 15
 Arg Met Phe Asp Ile Val Gly Thr His Leu Thr His Arg Asp Val Arg
 20 25 30
 Val Leu Ser Phe Leu Phe Val Asp Val Ile Asp His Glu Arg Gly Leu
 35 40 45
 Ile Arg Asn Gly Arg Asp Phe Leu Leu Ala Leu Glu Arg Gln Gly Arg
 50 55 60
 Cys Asp Glu Ser Asn Phe Arg Gln Val Leu Gln Leu Leu Arg Ile Ile
 65 70 75 80
 Thr Arg His Asp Leu Leu Pro Tyr Val Thr Leu Lys Lys Arg Arg Ala
 85 90 95
 Val Cys Pro

<210> 38
 <211> 146
 <212> PRT
 <213> Danio rerio

<400> 38
 Trp Glu Glu Thr Glu Cys Leu Ser Tyr Tyr Glu Thr Leu Ser Leu His
 1 5 10 15
 Glu Ile Phe Glu Ile Val Gly Ser Gln Leu Thr Glu Thr Cys Gly Gly
 20 25 30
 Glu Val Ala Phe Leu Leu Asp Glu Thr Tyr Pro Gly Lys His Pro Leu
 35 40 45
 Asp Pro Glu Gly Trp Thr Glu Asp Leu Pro Pro Gly Pro Asp Gly Ser
 50 55 60
 Pro Gln Ala Asn Thr Pro Cys Pro Arg Leu Leu Lys Ser Trp Gln Arg
 65 70 75 80
 Met Gln Pro Gln Lys Glu Gly Cys Ser Ile Ala Ser Arg His Arg Pro
 85 90 95
 Lys Ser Gly Val Glu Leu Leu Leu Glu Leu Glu Arg Arg Gly Tyr Leu
 100 105 110
 Ser Asp Ala Asn Leu Arg Pro Leu Leu Gln Leu Leu Arg Ile Leu Thr
 115 120 125
 Arg His Asp Val Leu Pro Phe Val Ser Gln Lys Lys Arg Arg Thr Val
 130 135 140
 Ser Pro
 145

<210> 39
 <211> 82
 <212> PRT
 <213> Homo sapien

<400> 39
 Met Asp Pro Phe Leu Val Leu Leu His Ser Val Ser Ser Ser Leu Ser

1	5	10	15
Ser Ser Glu Leu Thr Glu Leu Lys Tyr Leu Cys Leu Gly Arg Lys Arg			
	20	25	30
Lys Leu Glu Arg Val Gln Ser Gly Leu Asp Leu Phe Ser Met Leu Leu			
	35	40	45
Glu Gln Asn Asp Leu Glu Pro Gly His Thr Glu Leu Leu Arg Glu Leu			
	50	55	60
Leu Ala Ser Leu Arg Arg His Asp Leu Leu Arg Arg Val Asp Asp Phe			
65	70	75	80
Glu Leu			

<210> 40
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> oligonucleotide

<400> 40
 atgatgctga aaggaata 18

<210> 41
 <211> 40
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> oligonucleotide

<400> 41
 agtcctcgac tcacgtgcaa ggatgatgct gaaaggaata 40

<210> 42
 <211> 35
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> synthetic primer

<400> 42
 gcgaattcat gaacaaaccc ataacacccat caaca 35

<210> 43
 <211> 35
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> synthetic primer

<400> 43

ccgaggtggc ctgccagctc ctg 23

<210> 49
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic primer

<400> 49
acacccggac cttgcctgcc agctttac 28

<210> 50
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic primer

<400> 50
atgctttata acgtcagc 18

<210> 51
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic primer

<400> 51
tcacaccacc gaggagctct c 21

<210> 52
<211> 195
<212> DNA
<213> C. muridarum

<220>
<221> CDS
<222> (1)...(195)

<400> 52
gat tta tgg aaa caa ttt gtg ttt gct ctt gga gtg tct tca gaa gag 48
Asp Leu Trp Lys Gln Phe Val Phe Ala Leu Gly Val Ser Ser Glu Glu
1 5 10 15

cta gaa gct cat gaa ccc agt gaa gca gct aaa gct aag gtt gcg aca 96
Leu Glu Ala His Glu Pro Ser Glu Ala Ala Lys Ala Lys Val Ala Thr
20 25 30

ttt atg cgg tgg tgc aca ggg gat tct tta gca gca gga gta gcg gct 144
Phe Met Arg Trp Cys Thr Gly Asp Ser Leu Ala Ala Gly Val Ala Ala

<210> 60
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 60
cgcagaacgg gacataactt g 21

<210> 61
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 61
tgatatcgcc gcgctcgtcg tc 22

<210> 62
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 62
ggatggcatg ggggagggca ta 22